

Building the Foundation for Differentiation

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Differentiated Instruction is a proactively planned, interdependent system marked by

**A Positive
Community of
Learners**

**Focused, High-
Quality
Curriculum**

**Ongoing
Assessment**

**Flexible
Instructional
Arrangements**

Respectful Tasks



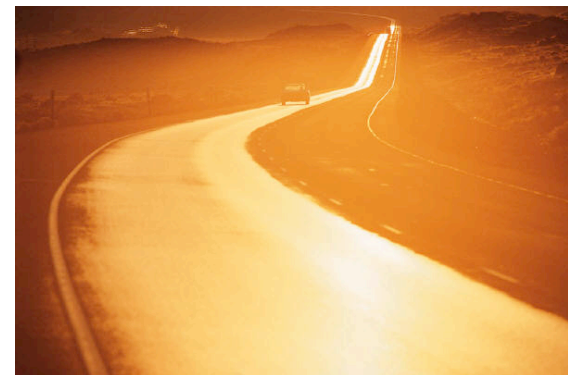
What Differentiated Instruction...

IS

IS NOT

- Differentiated instruction is more QUALITATIVE than quantitative.
- Differentiated instruction provides MULTIPLE approaches to content, process, and product.
- Differentiated instruction is STUDENT CENTERED.
- Differentiated instruction is a BLEND of whole class, group, and individual instruction.
- Differentiated instruction is "ORGANIC".
- Individual instruction
- Chaotic
- Just another way to provide homogenous instruction (You DO use flexible grouping instead)
- Just modifying grading systems and reducing work loads
- More work for the "good" students and less and different for the "poor" students
- New!

Learning to differentiate



*Is a Journey toward Teacher
Expertise*

Big Ideas Behind Energizing and Sustaining Differentiated Instruction

- Differentiation needs to be **intentionally** fostered to grow.
- Teachers make instructional decisions based upon of the **underlying philosophy** of differentiation.
- Teachers respond to students' readiness, interests, and learning profiles using both low-prep and high-prep strategies for designing and delivering **Respectful Tasks**.
- Teachers **develop routines** that support and facilitate differentiation.

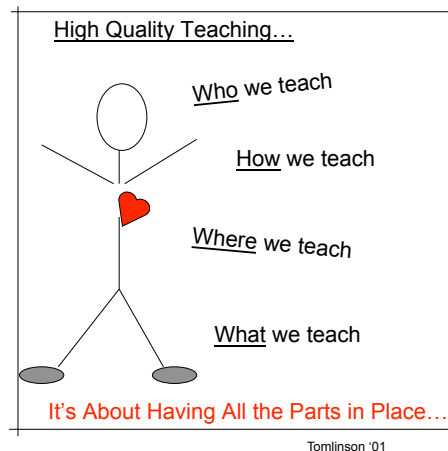
Big Idea Behind Energizing and Sustaining Differentiated Instruction

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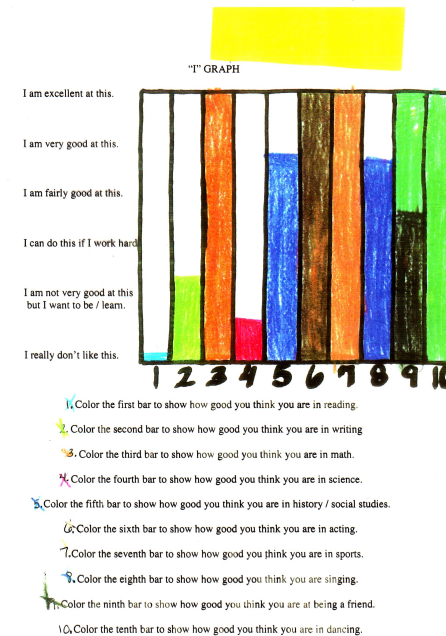
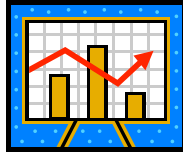
**A Positive
Community of
Learners**

**How Do We Foster True
Community?**

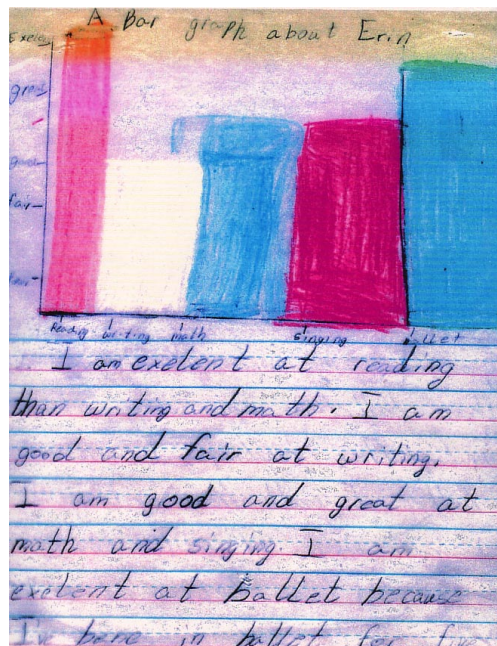


Me-Graphs

- List items on X-axis
 - Class items
 - Personal choice items
- Y access represents student's skill/ comfort level
- Post Graphs and make comments and generalizations
- Adapt as year progresses



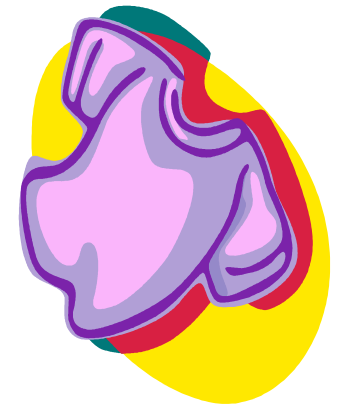
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Me-Shirts

Students decorate their own personal jerseys (real or paper) with words or art depicting who they are, their strengths, weaknesses, likes, dislikes, etc. Shirts are hung around room or in the hall and discussed in the same fashion as "me-graphs."





A Great Idea

I like to have students put their names on the fronts of their shirts and then decorate the backs with “clues” about who they are. In the beginning weeks of school, I hang them around the room with only the backs showing and students try to guess whose jersey is whose. When students eventually “reveal” their identities, their classmates are invested. Students really pay attention and get to know one another better.



Team-Jerseys

Students develop team names and corresponding jerseys (real or paper) with words or art depicting who they are as a group – their common strengths, weaknesses, likes, dislikes, etc.



Other Illustrations

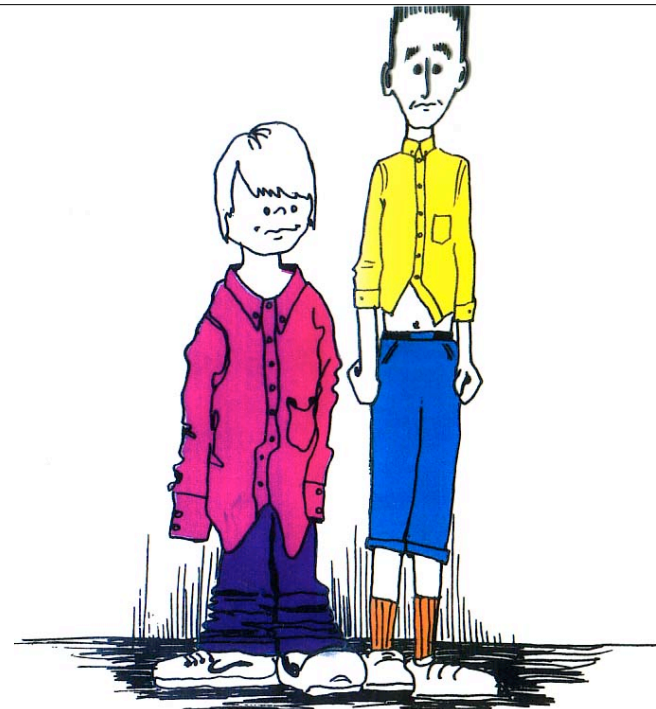


← **Shirts**

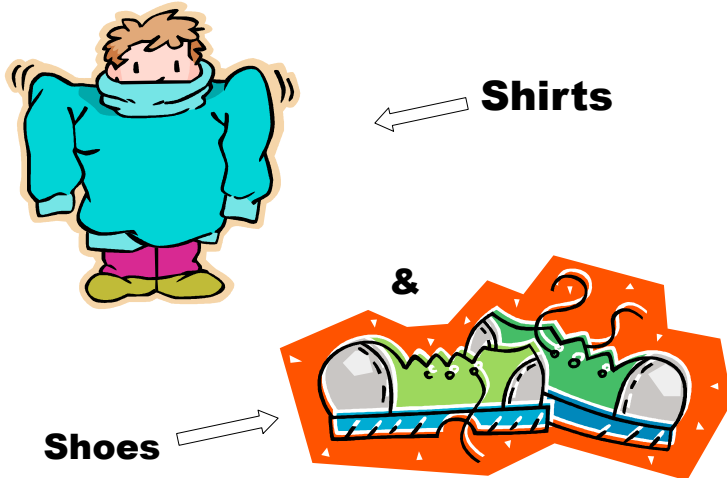
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Shoes →



Other Illustrations



A Great Idea!

"I'm going to use the shoe analogy to introduce my Kindergartners to the idea of Differentiation at the beginning of the year. Kindergarteners need lots of reminders, though, so I'm going to have each student trace his/her shoe on construction paper. I'll laminate those shoes, cut them out, and write students' names on them. Then, I can use those shoes to place kids in groups based on the results of my formative assessments. It will serve as a constant reminder of why we may be doing different things at different times!"



Lorena - Solana Beach Schools

Think – Pair - Share



• Think



• Pair



• Share

How can these strategies build community?

Respectful Tasks

Respectful Tasks?

STRUGGLING LEARNERS:

Complete the packet of worksheets on force and motion. You may choose to work with a partner if you like. Check your work with the answer key in the back of the room.

Key Principle of a Differentiated Classroom

Differentiation
Should Always be A
WAY UP – Never A
WAY OUT!

Source: Tomlinson, C. (2000). *Differentiating Instruction for Academic Diversity*. San Antonio, TX: ASCD



Appropriate Challenge...

OVER CHALLENGE:

UNDERCHALLENGE



BRAIN RESEARCH

Reticular Activating System or RAS = “Toggle Switch”
Center of Motivation

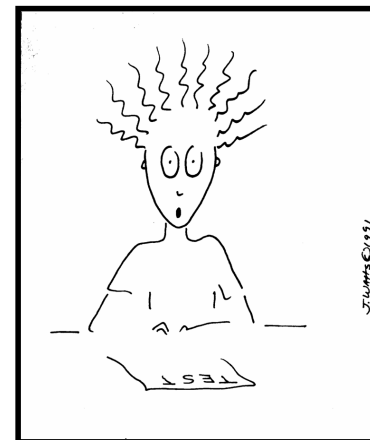
Only one of these three states is activated at a time:

HIGH	MIDDLE	LOW
Hot (EEG)	Mild (EEG)	Cold (EEG – sleeplike)
Limbic aroused	Cortical arousal	Sleep (depression)
Flight / Fight	Problem Solving	Relaxation
Out of Control	In Control	Off Duty
Carbohydrates	Proteins	Carbohydrates/Dairy
Burnout	Achievement	Depression
Extreme Challenge	Moderate Challenge	No Challenge

“Certain motivational states which interfere with learning condition are especially dangerous: anxiety and boredom. Anxiety occurs primarily when teachers expect too much from students; boredom occurs when teachers expect too little.” – Howard Gardner

Learning only happens when the toggle switch is in the middle position

**Over
Challenged**



**Under
Challenged**

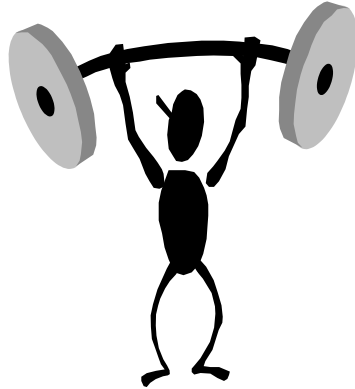


Learning is impossible in either state!

Kids (and adults) must be “in the ZONE!”

Moderate Challenge

- “Zone of proximal development” Vygotsky
- Problem solving
- In control
- Achievement
- “Relaxed alertness”



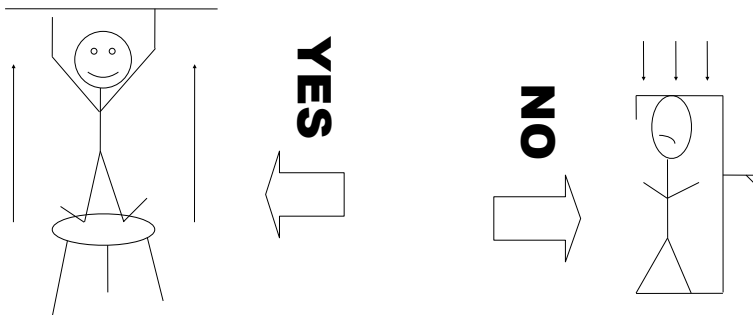
Z.P.D. in “Kid-Speak”

“It wasn’t too easy – I had to try! But it wasn’t so hard that I got frustrated or thought, ‘this is annoying!’”

~ 8th-Grade Physical Science Student~

Differentiation does NOT mean “dumbing down”

Rather than a vice that keeps kids down, differentiation is meant to be a stool that gives students a “boost.”



Hertberg – UVA – ‘03

FACT:

**STUDENTS COMPLETE ABOUT
20,000 TASKS IN THE COURSE OF
THEIR K-12 CAREER.**

(FISHER & HIEBERT, 1990)

Curriculum Quality, DI, & the Brain

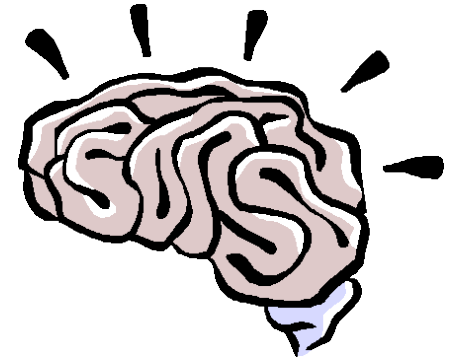
1. Curriculum races are not brain-friendly. Working memory is very limited. Time for practice and reflection are necessary for new learning to take place.
2. When learners are confronted with too much information, the chances for long-term storage decrease significantly.
3. The brain likes patterns (works more efficiently with them). Establishing patterns takes time and requires lessons that are focused on meaning-making.
4. Successful pattern making requires an affirmative answer to two elements:
(a) sense (Do I get this?) and (b) meaning (Is this relevant to me?) When learning makes sense to the individual and is relevant to the individual, there is significantly more brain activity and dramatic improvement in retention.
5. Whenever an individual's brain decides that something doesn't make sense or isn't relevant, the chance of long-term storage diminishes greatly. When both sense and meaning are present, the probability of long-term storage is high.

Sousa, D., & Tomlinson, C., (2010). *Differentiation & The Brain*. Bloomington, IN: Solution Tree

The human brain is NOT well designed for memorizing data.

Instead, it is most efficient & effective when it works with:

- Patterns
- Connections
- Meaning
- Significances

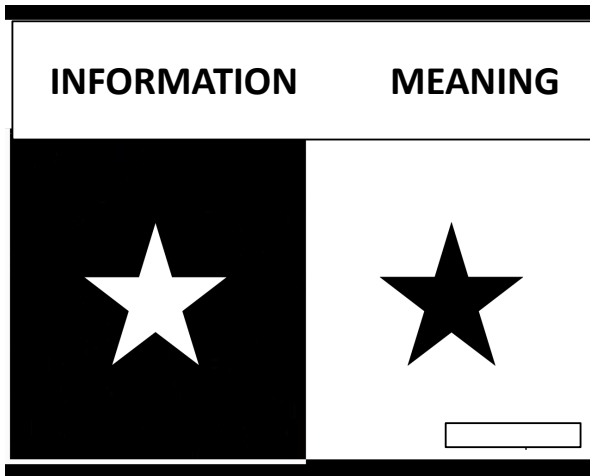


The most effective teaching, then, will help students focus on understanding rather than accumulation and storage.

Tomlinson, 2011

INFORMATION

MEANING



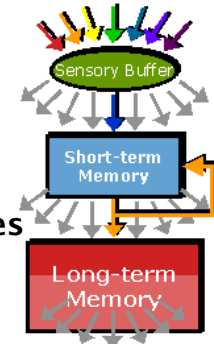
Effective teaching is not either information or meaning.

It's helping students see the meaning in the information they learn.

Tomlinson, 2011

LONG TERM MEMORY

A student must care about new information or consider it important for it to go through the limbic system expeditiously, form new synaptic connections, and be stored as a long-term memory. In other words, memories with personal meaning are most likely to become relational and long-term memories available for later retrieval.



Research-Based Strategies to Ignite Student Learning by Judy Willis, M.D. • ASCD • p. 20

Focused, High-Quality Curriculum

KNOW

- Facts
- Vocabulary
- Definitions
- Dates
- Algorithms

UNDERSTAND

- Principles
- Generalizations
- Big ideas of the discipline
- Conceptual ideas

BE ABLE TO DO

- Processes
- Skills of the discipline, basic skills, skills of production, skills of independence
- Habits of mind

“KNOW”

A “know” are the facts, vocabulary, dates, places, names, and examples you want students to memorize. *The “know” is massively forgettable.*

Example:

The Civil War began in 1861.

Blue is a primary color.

Equilateral triangle, ecosystem, George Washington

Procedural information (how to...)

“Do” Objectives

A “be able to do” objective is measurable by the end of the class. It usually includes a **skill**, not an **activity**.

Example: Students will be able to **analyze** graphs and **draw** conclusions.

Non-example: Students will be able to **complete a graph worksheet** with a partner.

“Do” Objectives

A “be able to do” objective is **measurable** by the end of the class. It always includes an **action verb**.

Example: Students will be able to **design** a **viable ecosystem**.

Non-Example: Students will be able to **appreciate** the intricacies of an ecosystem.

Example: Students will be able to **evaluate** the **positive and negative aspects** of a president’s administration.

Non-Example: Students will have **learned about** 3 different presidential administrations.

“Understand”

An “understand” is an essential truth that gives meaning to the topic. It is stated as a full sentence.

Begins with, “I want students to understand THAT...”

Example:

Multiplication is another way to do addition.

People migrate to meet basic needs.

All cultures contain the same elements.
Voice reflects the author.

Inductive reasoning processes contribute to independent learning.

Each type of animal has features that allow it to function in unique and specific ways to obtain food, reproduce, and survive in a particular place.

“Understand”

An “understand” are written statements of truth, the core to the meaning(s) of the lesson(s) or unit. These are what connects the parts of a subject to the student’s life and to other subjects.

Example: Good writers use the skills of logical organization and strong voice to convey a message to the reader.

Non-Example: Why writers use a variety of literary elements to inform, persuade, describe, and entertain readers.

Why Understanding Matters

NAEP Test Item:

“How many buses does the army need to transport 1,128 soldiers if each bus holds 36 soldiers?”

One-third of US 8th graders answered:

“31 remainder 12”



Clearly, students knew how to do the problem, but they did not understand the principle behind the question that would allow the to give the correct answer.

The greatest enemy of understanding is coverage.

-Howard Gardner

Your Turn



- Find a partner and pick up the KUD sort cards and sort board---how would you sort these cards?

For next time:

- Select a unit or lesson you'll be teaching shortly.
- Determine the learning goals you want students to achieve.
- Be prepared to share them when we meet in two weeks!

Evaluating your Experience

Below is a link to ASCD's online Professional Development Feedback Survey. We encourage all participants to complete the online evaluation within the next ten (10) days. All responses will be anonymously reported to ASCD.

[http://survey.ascd.org/TakeSurvey.aspx?
SurveyID=98K2mpl](http://survey.ascd.org/TakeSurvey.aspx?SurveyID=98K2mpl)

Thank you for taking the time to honestly evaluate the program. The results we receive help us to improve the quality of services you receive